

REMARKS/ARGUMENTS

Claims 17-29 and 34 are currently pending.

The Office Action rejected claims 17-22, 24, 26-29 and 34 under 35 U.S.C. § 102 as anticipated by U.S. patent application publication no. 2005/0090611 (“Huffer”), claim 23 under 35 U.S.C. § 103 as obvious over Huffer in view of U.S. patent 6,677,293 (“Allgaier”), and claim 25 under 35 U.S.C. § 103 as obvious over Huffer in view of U.S. patent application publication no. 2004/0171759 (“Lange”). In view of the following comments, Applicants respectfully request reconsideration and withdrawal of these rejections.

The pending claims require the addition of 0.01 to 25% of the required cosurfactant based on the amount of surfactant added to the emulsion. Thus, the present invention requires the addition of significantly more surfactant to the emulsion than required cosurfactant (at least 4 times as much). The applied art neither teaches nor suggests this invention.

The significance of the specified relatively small amount of cosurfactant required by the present invention is further explained in the Rule 132 declaration submitted concurrently herewith. As explained in the declaration, emulsions (including microemulsions) are stabilized via a tenside system. (Par. 4). The present invention relates to the discovery that addition of relatively small amounts of the required cosurfactants can stabilize the primary tenside system and/or can further stabilize a water/oil interface in a composition, thereby increasing the stability of the emulsion. In contrast, adding too much cosurfactant is actually detrimental to emulsion stability. (Par. 5).

For example, and with specific reference to microemulsions, the increased stability resulting from the addition of relatively small amounts of required cosurfactant can be demonstrated by figure 1 in the present application which illustrates the x-point shift in the direction of lower tenside concentrations upon addition of small amounts of required

cosurfactant. (Par. 6). This lowering of the x-point demonstrates synergism between the required cosurfactant and the surfactant (the required cosurfactant synergistically increases the stabilization efficiency of the surfactant). (Par. 6).

As noted above, adding too much cosurfactant is actually detrimental to emulsion stability. (Par. 7). More specifically, if more than 25% cosurfactant is added, the stability of the emulsion begins decreasing. (Par. 7). Thus, the amount of cosurfactant is result effective -- 25% or less cosurfactant needs to be added to obtain the full benefits associated with the present invention. (Par. 7).

In this regard, Applicant notes the attached precedential opinion from the Board of Patent Appeals and Interferences in *Ex parte Whalen* (Tab A). In *Whalen*, the Examiner's obviousness rejection was based on the reasoning that a person of ordinary skill in the art would have been motivated to optimize a specific property of prior art embolizing compositions (viscosity) because he would have had a reasonable expectation of success in achieving the safest clinical outcome and avoiding transvenous passage of the embolizing composition. (Pages 13-14). The Board rejected this reasoning, and concluded that the Examiner had not made out a *prima facie* case of obviousness.

Initially, the Board noted that "while discovery of an optimum value of a variable in a normal process is normally obvious, this is not always the case. One exception to the rule is where the parameter optimized was not recognized in the prior art as one that would affect the results." (Page 14).

The Board explained that the Examiner had not pointed to any teaching in the cited references, or had not provided any reasoning based on scientific reasoning, that would support the conclusion that it would have been obvious to optimize the prior art embolizing compositions by increasing viscosity to the levels required by the claims. In fact, the Board stated, the prior art suggested a low viscosity was desired (pages 14-15), leading the Board to

conclude that “in our view, none of the cited references would have led a person of ordinary skill in the art to modify the known embolic compositions by increasing their viscosity...”
(Page 15).

Following *Whalen*, it is clear that Huffer does not render the claimed stabilization methods using the specified relatively small amount of the required cosurfactants agents obvious. To the contrary, Huffer actually teaches away from the invention methods. Par. [0135] of Huffer teaches that surfactants, if added, are present in an amount of no more than 5% where total emulsifier content is no more than 10%. This paragraph goes on to state that preferably 1 to 2.5% surfactant is present. Thus, Huffer would lead one of ordinary skill in the art to use more cosurfactant than surfactant – in fact, Huffer would lead one of ordinary skill in the art to use significantly more cosurfactant than surfactant given that up to 10% of the composition can be cosurfactant + surfactant, and Huffer states that 1 to 2.5% surfactant is preferred. In stark contrast, the invention methods require the exact opposite and require adding at least 4 times more surfactant. Stated another way, Huffer does not recognize the required minimal amount of the required cosurfactant as a parameter that would affect emulsion stability.

This wide discrepancy of amounts/ratios of cosurfactant and surfactant, and Huffer's failure to recognize the result effective nature of the relative amounts and ratios, is significant. Huffer cannot teach or suggest the invention methods of stabilizing an emulsion or increasing the efficiency of a surfactant in an emulsion, particularly a microemulsion, using the minimal amounts of cosurfactant required by the present claims. Stated another way, Huffer would not lead one of ordinary skill in the art to employ the required amphiphilic polymer in combination with a surfactant in the required amounts to stabilize an emulsion and/or to increase surfactant efficiency in an emulsion – Huffer neither teaches, suggests, nor recognizes that the required amphiphilic polymers in the required minimal amounts are result

effective could be added to emulsions in the required amounts/ratios, particularly microemulsions, with any resulting benefits.

The secondary references, Allgaier and Lange, cannot compensate for Huffer's fatal deficiencies. These secondary references are cited merely for disclosure relating to functionalization of polyisobutenes or specific block copolymers, and do not teach or suggest the missing information in Huffer.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §§ 102 and 103.

Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon

Jeffrey B. McIntyre
Attorney of Record
Registration No. 36,867

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)